

# Ethernet Extension Experts

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## Enable-IT 850 CPE Ethernet Extender Quickstart Guide



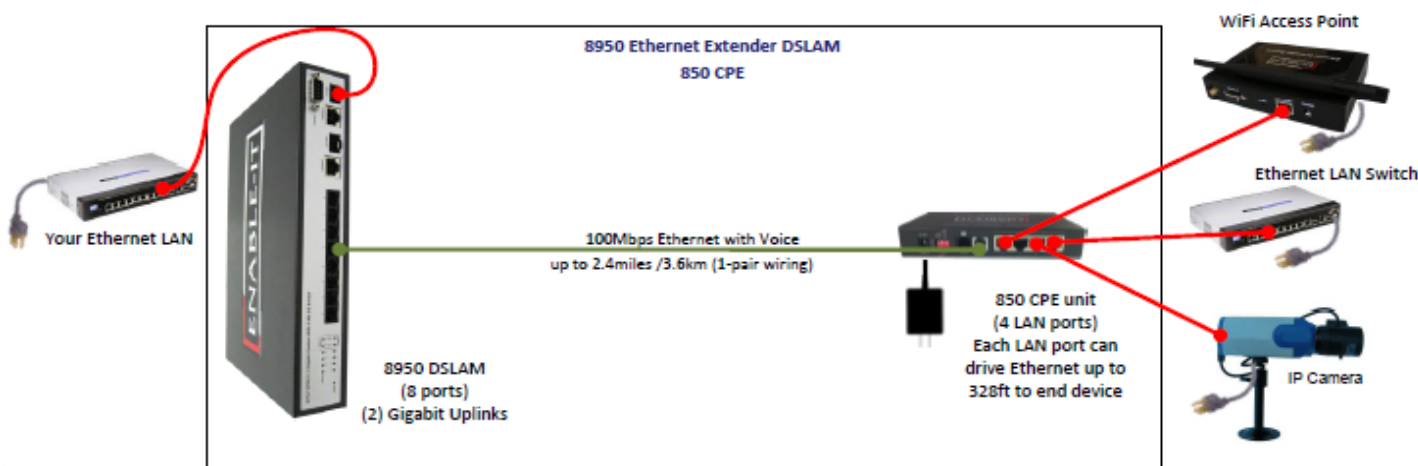
# INSTALLING THE 850 CPE ETHERNET EXTENDER

## Installation

The Enable-IT 850 CPE Extended Ethernet Units have a distance restriction of 8,000ft or 2,440m over 1-pair of Category 2 up to Category 5e / CAT6 wiring from device extension to device extension.

- Total distance limitation of 8,000ft or 2,440m from end to end.
- 1 Pair CAT-2 wiring or 4-pair Cat5e .30 Gage or better cabling is required.

For the Interlink port use an RJ-11 connector. Crimp a RJ-11 Male Head to each end of the contiguous wire run and using the following pins (1 & 2) straight through. This will deliver 1 Voice line, 100Mbps Full Duplex Ethernet Data.



## Perform an out of the box Test

**We highly recommend a quick test to ensure the working order of you 850 CPE units. To do this, please use one of the Telephone patch cords provided and attach to the 850 CPE Interlink port and then to the 8950 DSLAM Interlink port. Power up both 850 CPE units and the 8950 DSLAM Concentrator. The Green Sync LEDs will start flickering slowly and then fast as the units talk to each other. After a few seconds you should see a solid Green Interlink Sync LED on each 850 CPE unit to confirm a link is established. The 8950 DSLAM will take about 30 seconds to startup then link will be established with the 850 CPE. This confirms basic proper operation of the units. Next for a more detailed test and to confirm your LAN Equipment works with the 850 CPE, connect your Ethernet LAN to the 8950 DSLAM and remote device to the 850 CPE LAN ports and test connectivity. The Green Interlink Sync LED will pulse rapidly as it detects traffic.**

LED indicators will provide visual operational status of the 850 CPE units.

**Link** - Slow to fast flicker on power up – indicates negotiation of a link.  
Solid Green LED indicates link established and rapid pulse is traffic.

**Power** - Solid Green LED indicates that the unit is receiving 5v power correctly.

**ACT** - Yellow LEDs – Lit solid indicates the presence of local LAN  
– Blinking indicates the presence of local LAN traffic

For wiring over 1,970ft (600m) you must change DIP Switch 3 from 30a (ON) to 17a (OFF). For troubleshooting, first examine the backbone wiring pair and make sure you have solid connections. The Interlink Link LED will be lit solid Green with rapid pulsing on each 850 CPE unit to show proper connection and pairing. If the Interlink Link LED Link is flashing slow to fast and never goes solid .... Then follow the steps below:

- 1) Make sure your wiring is straight through and not connected to any Telco punch down block; If so remove from the block and use Telco butt clips to bridge wire.
- 2) Check for a firm connection of the RJ-11 connections in each 850 CPE unit and 8950 DSLAM, and power is applied to both the DSLAM and CPE units.
- 3) You can easily isolate any issue by performing an out of the box test confirm either the 850 CPE or your wiring. It is possible an outside interference has been introduced into your wiring.

Expected Throughput speeds utilizing CAT5 or better wiring

Up to 700ft (200m)	- 100Mbps Full Duplex
700ft (200m) to 1,350ft (400m)	- 95Mbps Full Duplex
1,350ft (400m) to 1,970ft (600m)	- 75Mbps Full Duplex
1,970ft (600m) to 2,625ft (800m)	- 55Mbps Full Duplex -17a mode
2,625ft (800m) to 3,280ft (1,000m)	- 44Mbps Full Duplex -17a mode
3,300ft (1,005m) to 6,000 (1,828m)	- 30Mbps Full Duplex -17a mode
6,100ft (1,860m) to 8,000 (2,440m)	- 10Mbps Full Duplex -17a mode

## Performance Settings

A DIP Switch is provided on the left side of each unit for setting line performance attributes.

If the Interlink cabling is more than 1,500ft / 457m – Set DIP Switch 3 up For 17a mode. This optimizes faster symmetrical throughput at higher distances.



### Default DIP settings

850 CPE – All down set in the ON position

850 CPE CO – DIP position 1 up (OFF)

DIPs 2-4 down (ON)

DIP 1 – CO/CPE mode

DIP 2 – Fast/Interleave mode

DIP 3 – 30a/17a mode – short distance or long distance mode

DIP 4 – 6dB/9dB – 9dB mode cleans up the signal noise ratio on the telephone wiring

If the Interlink cabling is less than 1,500ft 457m - the DIP switch 3 must be down For 30a mode (set to ON) position for the unit to work properly.